REMARKS

Applicant responds hereby to the office action dated October 31, 2007. Claims 1-5, 8-11, and 16 are amended hereby. Claims 13-14 and 17 were previously cancelled without prejudice or disclaimer of subject matter. Claims 1-12 and 15-16 remain pending hereinafter, where claims 1, 11, 12, and 16 are independent claims.

Favorable consideration and allowance of the claims of the present application are respectfully requested.

Response to rejections under 35 U.S.C. §102(a)

Claims 1-2, 6, 11-12, and 15-16 are rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Uga et al ("A fast and compact longest match prefix look-up method using pointer cache for very long network address", 1999 IEEE, pages 595-602) (hereinafter Uga).

Regarding Claims 1, 12 and 16, Claims 1 and 16 are amended to clarify the meanings of the destination address, the default-route-prefix, and the routing table cache. The added subject matter is found in the paragraphs [0029]-[0030], [0032], [0042], [0044], and [0046] of the present application. Therefore, no new matter is entered. As indicated in amended Claims 1 and 16, the default-route-prefix is a part of an destination IP address and is provided only in a routing table cache. The destination address means a destination IP address. The routing table cache comprises a prefix that is a part of a destination IP address and the destination IP address.

Uga states at page 597, the third paragraph "The cache table has pointers to intermediate nodes in the tree whose prefix length is either 8, 16, or 24. We refer those nodes as aggregation nodes". Figure 5 of Uga also shows CAM8 stores pointers to nodes in a tree. **A pointer is basically an address of a memory device.** Figure 4 of Uga also indicates CAM8, CAM16, and CAM24 stores pointers to nodes in the tree, which is a routing table. Claims 1 and 16 are amended to include a limitation, "wherein the routing table cache (L_1) comprises a prefix that is a part of a destination IP address and the destination IP address", which is not taught or suggested by Uga. The added limitation is supported in the paragraphs [0029]-[0030], [0044], and [0046].

Ugs states at page 597, right-hand column, second paragraph "We **store the default route at the aggregation node** when we encounter a "no-match" situation in the search range". Figure 4 and Figure 6 of Uga shows that **aggregation nodes exists in a tree, which is a routing table**. Uga states at page 595, last paragraph "the routing table can be arranged in a tree-structure such as Trie or Patricia". Figure 7 and Figure 8 of Uga further shows the aggregation node exists in a tree, which represents a routing table. Uga also states "If new prefix entry is added to the routing table, a new node is added to the tree". However, the paragraph [0042] of the present application states "the default-route-prefix will only be entered into the routing table cache and not be stored as an actual prefix in the routing table". Amended claims 1 and 16 now includes a limitation, "the default-route-prefix (P_d) is provided only in the routing table cache (L_1)", which is not taught or suggested by Uga.

Uga states at page 597, right-hand column, second paragraph "Prefixes which are not in routing table are aggregated into the aggregation node. For example, 12.81/13 which is not in routing table in Fig. 5 is aggregated into 12/8 in the cache." Figure 5 of Uga shows routing table of Uga stores Prefixes and next-hops. The Prefixes in Uga is not part of an IP address, but is an address of a node in the tree. Figure 6 and Figure 7 of Uga show each node in the tree has X/X, X.X/X or X.X.X/X address formation. In Figure 5 of Uga, the aggregated prefix in CAM8 is aggregated from Prefixes in the routing table. Therefore, the aggregated prefixes in CAM8 is not part of an IP address, but a part of an address of a node in the tree. Claims 1 and 16 of the present application includes an amended limitation, "a default-route-prefix (P_d) that is a part of the destination IP address", which is not taught or suggested by Uga. The added limitation is supported in the paragraphs [0032], [0044], and [0046] of the present application.

Claim 12 is written *Beauregard* form with the subject matter of Claim 1.

Regarding Claim 2, Uga states at page 597, right-hand column, second paragraph "The default outgoing route is the outgoing route of the longest match prefix **of the node**". In addition, Figure 6 of Uga shows outgoing routes are written as "X" or "Y", which are not prefix of an IP address. Claim 2 of the present application is amended to "the default-route-prefix (P_d) is determined to be said prefix of at least the destination IP address (d)", which is not taught or

suggested by Uga. The added limitation is supported in paragraphs [0044] and [0046] of the present application.

Regarding Claim 6, the Claim 6 depends on Claim 1. The Claim 1 is patentably distinct as desribed above. In the virtue of dependency, the Claim 6 is also patentably distinct.

Regarding Claims 11 and 15, Uga states at page 597, right-hand column, second paragraph "For example, 12.81/13 which is not in the routing table in Fig. 5 is aggregated into 12/8 in the cache". Figure 5 of Uga shows CAM8 has aggregated prefixes and pointers to intermediate nodes in the tree. However, an aggregated prefixe in CAM8 **is not part of an IP address**, but a part of a Prefix in the routing table. In Uga, a Prefix in the routing table is an address of node in a tree, which represents the routing table. Figure 6 of Uga shows Prefixes are used as addresses in nodes in the tree. Therefore, an aggregated prefix in CAM8 is a part of an address of a node in a tree, which is a data structure. Claim 11 is amended to include a limitation, a default-route-prefix (P_d) that is a part of an **IP** address, which is not taught or suggested by Uga. The added limitation is supported in the paragraphs [0032], [0044], and [0046] of the present application. Claim 15 includes the subject matter of Claim 11.

Thus, the Examiner is respectfully requested to withdraw the rejections of Claims 1-2, 6, 11-12, and 15-16 under 35 U.S.C. §102(b).

Response to rejections under 35 U.S.C. §103(a)

Claims 3-5 and 7-10 are rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Uga.

Regarding Claim 3, Uga does not disclose a method/device for handling a situation that no pointer is found in CAM8, CAM16, and CAM 24. (CAMs include pointers to intermediate nodes in a tree, which represents a routing table.) In addition, based on Figure 4 of Uga, Uga do not allow a situation that inputted IP address do not find hit in CAM8, CAM16, and CAM24. If the situation (i.e., inputted IP address do not find hit in CAM8, CAM16, and CAM24) occurs in Uga, the tree (routing table) cannot be searched. However, Claim 3 of present application states

"wherein in a first lookup step for the destination IP address (d) the destination address prefix being a prefix thereof is searched in the routing table cache (L_1), and **wherein if said first lookup step results in not finding such destination address prefix, in a second lookup step for said destination IP address (d) the destination address prefix being a prefix thereof is searched in the routing table (L_2)**".

Claim 3 is amended to clarify the meaning of the destination address. The destination address in the present application means a destination IP address. The added limitation is supported in paragraphs [0044] and [0046].

Regarding Claim 4, Claim 4 is amended to clarify the meaning of the destination address. The destination address in the present application means a destination IP address. The added limitation is supported in paragraphs [0044] and [0046].

The Examiner states in the Office Action "at the time of the invention, it was old and well known that a cache could be used for storing frequently accessed data items". However, Applicants think the use of a cache is not well-known in the art (routing or networking). Therefore, Applicants respectfully request to provide a reference which teaches or suggests "wherein if the second lookup step on the routing table (L_2) results in finding the destination address prefix being said prefix of the destination IP address (d) a matching destination address prefix, the found destination address prefix entry is entered into the routing table cache (L_1) in a cache update step".

Regarding Claim 5, Claim 5 is amended to clarify the meaning of the destination address. The destination address in the present application means a destination IP address. The added limitation is supported in paragraphs [0044] and [0046]. In addition, Claim 5 depends on Claim 3. Claim 3 depends on Claim1. The Claims 1 and 3 are patentably distinct as desribed above. In the virtue of dependency, the Claim 5 is also patentably distinct.

Regarding Claim 7, Claim 7 depends on Claim 3. Claim 3 depends on Claim 1. The Claims 1 and 3 are patentably distinct as desribed above. In the virtue of dependency, the Claim 7 is also patentably distinct.

Regarding Claim 8, Claim 8 is amended to clarify the meaning of the destination address. The destination address in the present application means a destination IP address. The added limitation is supported in paragraphs [0044] and [0046]. Claim 8 depends on Claim 7. Claim 7 depends on Claim 3. Claim 3 depends on Claim 1. The Claims 1, 3 and 7 are patentably distinct as desribed above. In the virtue of dependency, the Claim 8 is also patentably distinct.

Regarding Claim 9, Claim 9 is amended to clarify the meaning of the destination address. The destination address in the present application means a destination IP address. The added limitation is supported in paragraphs [0044] and [0046]. Claim 9 depends on Claim 7. Claim 7 depends on Claim 3. Claim 3 depends on Claim 1. The Claims 1, 3 and 7 are patentably distinct as described above. In the virtue of dependency, the Claim 9 is also patentably distinct.

Regarding Claim 10, Claim 10 is amended to clarify the meaning of the destination address. The destination address in the present application means a destination IP address. The added limitation is supported in paragraphs [0044] and [0046]. Claim 10 depends on on Claim 3. Claim 3 depends on Claim 1. The Claims 1 and 3 are patentably distinct as desribed above. In the virtue of dependency, the Claim 10 is also patentably distinct.

Thus, the Examiner is respectfully requested to withdraw the rejections of Claims 3-5 and 7-10 under 35 U.S.C. §103(a).

Conclusion

In view of the foregoing, this application is now believed to be in condition for allowance, and a Notice of Allowance is respectfully requested. If the Examiner believes a telephone conference might expedite prosecution of this case, it is respectfully requested that he call applicant's attorney at (516) 742-4343.

Respectfully submitted,

Steve Fischman
Registration No. 34,594

Scully, Scott, Murphy & Presser, P.C.
400 Garden City Plaza, Suite 300
Garden City, New York 11530
(516) 742-4343
SF:JP